

What is claimed is:

1           1. A process to bring an instance of an information technology (hereafter  
2   IT) service into existence, comprising the steps of:  
3           using a computer to access a data structure of a service action and perform  
4   a fulfillment process comprising the steps:  
5                   (A) using a computer to follow pointers in said data  
6                   structure to an appropriate fulfillment workflow;  
7                   (B) loading said fulfillment workflow into memory of said  
8                   computer;  
9                   (C) using said computer to execute computer  
10                  instructions pointed to by one or more pointers in said  
11                  fulfillment workflow; and  
12                   (D) receiving and recording any feedback data entered  
13                  by a human who has been given instructions by said computer  
14                  to carry out one or more steps of said fulfillment workflow.

1           2. The process of claim 1 wherein step C includes the steps of executing  
2   computer instructions to execute steps in said fulfillment workflow which can be  
3   accomplished by said computer, and executing computer instructions that control  
4   said computer to send details of a task that can only be performed by a human to  
5   the human by email or by any other suitable form of communication with a human,  
6   and wherein said feedback data includes cost and time to complete feedback  
7   information for each step accomplished either by a human or by a computer, and  
8   further comprising the steps:  
9                   (E) comparing said cost and time to complete feedback  
10                  information for each step of said fulfillment workflow to estimated

11 cost and time to complete information previously stored in a data  
12 structure, and generating a report;  
13 (F) after completion of processing of a fulfillment workflow,  
14 determining if it is the last fulfillment workflow in a heirarchy of  
15 fulfillment workflows each of which is pointed to by a pointer in a data  
16 structure of a service action in a heirarchy of service actions;  
17 (G) if another fulfillment workflow is found in a heirarchy of  
18 fulfillment workflows, performing steps B, D, D again to execute the  
19 new workflow; and  
20 (H) repeating steps F and G until all fulfillment workflows in  
21 said heirarchy of fulfillment workflows have been found and executed.

1 3. The process of claim 1 wherein step D comprises receiving and storing  
2 feedback information entered by said human as to how long it took said human to  
3 accomplish the step or steps assigned thereto by said computer and whether  
4 each step assigned to said human was completed, and wherein said feedback  
5 data includes cost and time to complete feedback information for each step  
6 accomplished either by a human or by a computer, and further comprising the  
7 steps of comparing the time and cost it actually took to complete each step in a  
8 fulfillment workflow to estimated time and cost in a data structure and preparing a  
9 report of the results of said comparison.

1 4. The process of claim 1 wherein step A comprises following a pointer in  
2 said data structure of said service action (hereafter referred to as a child service  
3 action) to a fulfillment workflow, and then performing steps B, C and D to execute  
4 the computer instructions linked to every step of said workflow, and then following  
5 a pointer, if there is one, in said data structure to a data structure of a parent  
6 service action which is at a next level up in a heirarchy of service actions and  
7 following a pointer in said data structure of said parent service action to a

8 fulfillment workflow for said parent service action, and then performing steps B, C  
9 and D again, and repeating the process of following pointers in the data structure  
10 of the service action whose fulfillment workflow has been processed to another  
11 service action data structure at the next level up in said heirarchy and executing the  
12 fulfillment workflow instructions of any service action found at another level of said  
13 heirarchy until all service actions in said heirarchy have been found and all the  
14 fulfillment workflows pointed to by said service actions have been executed.

1 5. The process of claim 1 wherein said service action is part of a heirarchy  
2 of service actions, each of which has an approval workflow with the approval  
3 workflow of the highest service action in said heirarchy superseding the approval  
4 workflows of lower service actions in said heirarchy, and further comprising the  
5 steps of following pointers in the data structures of service actions in said  
6 heirarchy starting with the data structure of said service action initially loaded to  
7 find an "eve" service action which is highest in said heirarchy, and following a  
8 pointer in a data structure of said eve service action to an approval workflow, and  
9 loading said approval workflow into memory and executing computer instructions  
10 which implement each step of said approval workflow.

1 6. The process of claim 1 wherein said service action is part of a heirarchy  
2 of service actions, each of which has a fulfillment workflow with the fulfillment  
3 workflow of the highest service action in said heirarchy complementing the  
4 workflows of lower service actions in said heirarchy, and wherein steps A, B, C and  
5 D comprises following pointers in the data structures of service actions in said  
6 heirarchy starting with the data structure of said service action initially loaded and  
7 executing all said fulfillment workflows pointed to by pointers of data structures of  
8 service actions in said heirarchy.

1           7. A process to bring an instance of an information technology (hereafter  
2 IT) service into existence, comprising the steps of:

3                   (1) using a computer to obtain management approval for  
4                   creation of an information technology service instance by accessing a  
5                   data structure of a service action and executing computer instructions  
6                   linked to steps of an approval workflow defined in or pointed to by  
7                   said data structure, said approval workflow having been defined in  
8                   advance by an IT professional to define steps that need to be taken to  
9                   obtain approval in accordance with an approval policy;

10                  (2) if approval is obtained, using a computer to perform a  
11                  fulfillment process comprising the steps:

12                           (A) using a computer to follow pointers in said data  
13                           structure to an appropriate fulfillment workflow;

14                           (B) loading said fulfillment workflow into memory of said  
15                           computer;

16                           (C) using said computer to execute computer  
17                           instructions pointed to by one or more pointers in said  
18                           fulfillment workflow; and

19                           (D) receiving and recording any feedback data entered  
20                           by a human who has been given instructions by said computer  
21                           to carry out one or more steps of said fulfillment workflow.

1           8. The process of claim 7 wherein step 2C includes the steps of executing  
2 computer instructions to execute steps in said fulfillment workflow which can be  
3 accomplished by said computer, and executing computer instructions that control  
4 said computer to send details of a task that can only be performed by a human to  
5 the human by email or by any other suitable form of communication with a human.

1           9. The process of claim 7 wherein step 2D comprises receiving and storing  
2 feedback information entered by said human as to how long it took said human to  
3 accomplish the step or steps assigned thereto by said computer and whether  
4 each step assigned to said human was completed.

1           10. The process of claim 7 wherein said service action is part of a heirarchy  
2 of service actions, each of which has an approval workflow with the approval  
3 workflow of the highest service action in said heirarchy superseding the approval  
4 workflows of lower service actions in said heirarchy, and wherein step 1  
5 comprises following pointers in the data structures of service actions in said  
6 heirarchy starting with the data structure of said service action initially loaded in  
7 step 1 to find an "eve" service action which is highest in said heirarchy, and  
8 following a pointer in a data structure of said eve service action to an approval  
9 workflow, and loading said approval workflow into memory and executing  
10 computer instructions which implement each step of said approval workflow.

1           11. The process of claim 7 wherein said service action is part of a  
2 heirarchy of service actions, each of which has a fulfillment workflow with the  
3 approval workflow of the highest service action in said heirarchy superseding the  
4 approval workflows of lower service actions in said heirarchy, and wherein step 1  
5 comprises following pointers in the data structures of service actions in said  
6 heirarchy starting with the data structure of said service action initially loaded in  
7 step 1 to find an "eve" service action which is highest in said heirarchy, and  
8 following a pointer in a data structure of said eve service action to an approval  
9 workflow, and loading said approval workflow into memory and executing  
10 computer instructions which implement each step of said approval workflow.

1           12. The process of claim 7 wherein step 2A comprises following a pointer  
2 in said data structure of said service action (hereafter referred to as a child service

3 action) to a fulfillment workflow, and then performing steps 2B, 2C and 2D to  
 4 execute the computer instructions linked to every step of said workflow, and then  
 5 following a pointer, if there is one, in said data structure to a data structure of a  
 6 parent service action which is at a next level up in a heirarchy of service actions  
 7 and following a pointer in said data structure of said parent service action to a  
 8 fulfillment workflow for said parent service action, and then performing steps 2B,  
 9 2C and 2D again, and repeating the process of following pointers in the data  
 10 structure of the service action whose fulfillment workflow has been processed to  
 11 another service action data structure at the next level up in said heirarchy and  
 12 executing the fulfillment workflow instructions of any service action found at  
 13 another level of said heirarchy until all service actions in said heirarchy have been  
 14 found and all the fulfillment workflows pointed to by said service actions have been  
 15 executed.

1 13. The process of claim 7 wherein step 1 includes the steps of following a  
 2 pointer in said data structure of said service action (hereafter referred to as a child  
 3 service action) to an approval workflow, and then performing the following steps  
 4 (3) loading said approval workflow into memory of said  
 5 computer;  
 6 (4) using said computer to execute computer  
 7 instructions pointed to by one or more pointers in said  
 8 approval workflow; and  
 9 (5) receiving and recording any feedback data entered  
 10 by a human who has been given instructions by said computer  
 11 to carry out one or more steps of said approval workflow.  
 12 and then following a pointer, if there is one, in said data structure to a data  
 13 structure of a parent service action which is at a next level up in a heirarchy of  
 14 service actions and following a pointer in said data structure of said parent service  
 15 action to an approval workflow for said parent service action, and then performing

16 steps 3, 4 and 5 again, and repeating the process of following pointers in the data  
17 structure of the service action whose approval workflow has been processed to  
18 another service action data structure at the next level up in said heirarchy and  
19 executing the approval workflow instructions of any service action found at another  
20 level of said heirarchy until all service actions in said heirarchy have been found  
21 and all the approval workflows pointed to by said service actions have been  
22 executed.

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1 14. A computer readable medium having computer-executable instructions  
2 for performing a method comprising:

3 (1) using a computer to obtain management approval for  
4 creation of an information technology service instance by accessing a  
5 data structure of a service action and executing computer instructions  
6 linked to steps of an approval workflow defined in or pointed to by  
7 said data structure, said approval workflow having been defined in  
8 advance by an IT professional to define steps that need to be taken to  
9 obtain approval in accordance with an approval policy;

10 (2) if approval is obtained, using a computer to perform a  
11 fulfillment process comprising the steps:

12 (A) using a computer to follow pointers in said data  
13 structure to an appropriate fulfillment workflow;

14 (B) loading said fulfillment workflow into memory of said  
15 computer;

16 (C) using said computer to execute computer  
17 instructions pointed to by one or more pointers in said  
18 fulfillment workflow; and

19 (D) receiving and recording any feedback data entered  
20 by a human who has been given instructions by said computer  
21 to carry out one or more steps of said fulfillment workflow.

1 15. A computer programmed to carry out the following process:  
2 (1) using said computer to obtain management approval for  
3 creation of an information technology service instance by accessing a  
4 data structure of a service action and executing computer instructions  
5 linked to steps of an approval workflow defined in or pointed to by  
6 said data structure, said approval workflow having been defined in  
7 advance by an IT professional to define steps that need to be taken to  
8 obtain approval in accordance with an approval policy;  
9 (2) if approval is obtained, using said computer to perform a  
10 fulfillment process comprising the steps:  
11 (A) using said computer to follow pointers in said data  
12 structure to an appropriate fulfillment workflow;  
13 (B) loading said fulfillment workflow into memory of said  
14 computer;  
15 (C) using said computer to execute computer  
16 instructions pointed to by one or more pointers in said  
17 fulfillment workflow; and  
18 (D) receiving and recording any feedback data entered  
19 by a human who has been given instructions by said computer  
20 to carry out one or more steps of said fulfillment workflow.